



**NUCLEAR DECOMMISSIONING CITIZENS ADVISORY PANEL
PUBLIC SERVICE DEPARTMENT**

**Nuclear Decommissioning
Citizens Advisory Panel
Annual Report to the Governor
and the Vermont Legislature**

2019

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**- Nuclear Decommissioning Citizens Advisory Panel -
2019 Annual Report to the Governor of Vermont and the
Energy Committees of the General Assembly
(House Energy & Technology,
House Commerce & Economic Development,
House Natural Resources, Fish and Wildlife, and
Senate Natural Resources & Energy Committees)**

I. Statutory Authority and Duties

The nineteen-member Vermont Nuclear Decommissioning Citizens Advisory Panel (NDCAP) was established during the 2014 legislative session. For details on membership and duties, see <https://legislature.vermont.gov/statutes/fullchapter/18/034>. The list of current members of the Nuclear Decommissioning Citizens Advisory Panel may be found at [http://publicservice.vermont.gov/electric/ndcap \(aka, the NDCAP website\)](http://publicservice.vermont.gov/electric/ndcap (aka, the NDCAP website)). Changes in Panel membership throughout 2019 may be discerned by reviewing the meeting minutes and meeting recordings available at the NDCAP website.

II. Charter

The NDCAP Charter was adopted on February 25, 2015 and amended on May 26, 2016. The Charter is available at <https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20NDCAP%20Charter%20%28Adopted%202016.05.26%29.pdf>. No changes to the NDCAP Charter were made during 2019. However, as detailed in Sections III and XIII, potential changes to the NDCAP Charter have been discussed throughout 2019.

III. Meeting Highlights

The NDCAP held four meetings in 2019; meetings were held in January, May, October and December. All meetings were open to the public and opportunities for comments from the public were provided. Each meeting included an update on recent activities by both NorthStar (Vermont Yankee's owners as of January 11, 2019) and the State of Vermont, as well as ample time for discussion and comments from Panelists and the public. Educational and issue-specific topics were discussed at all meetings; a summary of each meeting is presented below. Much of the meeting discussions in 2019 centered on understanding the information available to the State and the general public through the reporting required by the Public Utility Commission decision approving Vermont Yankee's (VY's) purchase by NorthStar. An additional meeting focus was potential changes to Panel composition and duties now that Vermont Yankee's decommissioning is actively underway.

The minutes of each meeting can be found on the NDCAP website (a dedicated section of the Public Service Department website) at <http://publicservice.vermont.gov/electric/ndcap>. A complete video recording of each meeting can be found at:

<https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel>.

(Links to these video recordings are also available through the NDCAP website).

Additional information regarding VY's active decommissioning is available at the Public Service Department's recently launched "VY Decommissioning" website at:

<https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>

January 31, 2019

- **Update on Decommissioning Activities at VY:** Panelist Corey Daniels, VY's Senior Spent Fuel Storage Manager, provided a verbal update of recent activities at the VY site. Removal and decontamination of Spent Fuel Storage racks from VY's (fully defueled) Spent Fuel Pool has commenced. Preparations for segmenting VY's reactor vessel continue; planning for the eventual removal of the reactor vessel and other large components from site is underway. Strategies for abating onsite non-radiological hazardous materials (e.g., asbestos and lead) are being investigated.
- **Summary of January 9 NRC Pre-Decisional Enforcement Conference (PEC) on Holtec Dry Cask Design:** Tony Leshinskie, Vermont State Nuclear Engineer, provided a brief summary of this Nuclear Regulatory Commission (NRC)-sponsored meeting, which discussed two NRC-identified apparent regulatory violations in Holtec's Dry Cask Design Control practices. Holtec acknowledged that its actions in implementing a Dry Cask component design change delivered to several nuclear power plant sites (including VY) violated NRC regulations. During the PEC, Holtec outlined its investigation into the design error, its impact on delivered dry cask components and its corrective actions to assure that similar violations will not occur in the future. Holtec's presentation indicated that VY's dry casks and their spent fuel are not adversely impacted by the improper design change. While 35 of VY's 58 dry casks are potentially impacted by this design issue, the NRC has no immediate safety concerns with the VY dry cask design.
- **State of Vermont Role in VT Yankee Decommissioning:** Vermont Public Service Department Special Counsel Allison Bates-Wannop presented an overview of the NRC and the VT Public Utility Commission (PUC) decisions approving VY's sale to NorthStar Group Services. State Agency officials then discussed the roles of the several State Agencies that will oversee VY's active decommissioning. Allison Bates-Wannop outlined the Public Service Department's role in tracking progress and expenditures during VY's decommissioning and plans for publicly available project status information. Justin Kolber, Vermont Assistant Attorney General in the Environmental Protection Division, outlined the Attorney General's role. The Attorney General's Office is available to provide legal advice to agencies and review financial documents during decommissioning.

Panelist Peter Walke, Deputy Secretary for the Agency of Natural Resources, outlined ANR's oversight role in VY's non-radiological remediation and site restoration activities. Panelist Dr. Bill Irwin, Vermont Department of Health, described surveillances that the Department conducts at the VY site (and all in-state radioactive material user sites) and outlined the Department's authority established by the Vermont Radiological Health Rule. Surveillance results are available on the Department of Health's website.

The slides for this combined State Agencies presentation are available at:

<http://publicservice.vermont.gov/electric/ndcap>

State Agency websites that provide Vermont Yankee-related information include:

<http://publicservice.vermont.gov/electric/ndcap>

<https://publicservice.vermont.gov/publications-resources/consumers>

(accepts public comments on VY matters; comments may also be emailed to

PSD.NDCAP@vermont.gov)

<https://ago.vermont.gov/nuclear-matters>

<https://anr.vermont.gov/Vermont%20Yankee%20Decommissioning>

<http://www.healthvermont.gov/health-environment/radiological-health/vermont-yankee>

- **Finalization & Approval of Annual Report to the VT Legislature:** The Panel reviewed the draft of the 2018 Annual Report to the Legislature. Several minor revisions to the draft were made. Echoing discussion throughout this Panel meeting, concern was raised that the report does not discuss who would be responsible for funding the VY site clean-up if the current decommissioning funds are spent and NorthStar declares bankruptcy prior to completion of the clean-up. The report was approved without adding any such discussion.
- **Reconstitution of the Issues Committee:** The Panel's Issues Committee was reconstituted as described in Section XI herein.

May 20, 2019

- **State Evaluation of NorthStar Required Annual Report:** Public Service Department (PSD) Special Counsel Allison Bates-Wannop summarized the State's evaluation of NorthStar's annual report required by the Memorandum of Understanding (MOU) that went into in effect with the completion of NorthStar's purchase of VY on January 11 of this year. The report described what has been completed and what is to be expected in the remaining decommissioning and site restoration work. All plans are progressing as expected and are currently on budget. The presentation slides for this evaluation are available at <http://publicservice.vermont.gov/electric/ndcap>
- **State Agencies' VY Decommissioning Oversight Status Update: Public Service, Natural Resources, Health:** PSD has selected an independent technical consultant to assist in decommissioning oversight. The consultant will be announced after contract finalization. PSD's website will include a new "VT Yankee Decommissioning" web page. PSD's existing NDCAP webpages will become part of this new webpage. The Vermont Department of Health had nothing to report at this time.

Gerald Noyes of the Vermont Agency of Natural Resources (ANR) / Department of Environmental Conservation (DEC) briefly described the types of non-radiological site sampling and investigations conducted to date at VY. DEC and its hired technical consultant, ATC Group Services, are currently reviewing monitoring plans and post closure site restoration protocols specified in the MOU, as well as how to maintain an efficient exchange of information from the VY Yankee site. One current project is the asbestos abatement at the site cooling towers. ATC is reviewing the abatement procedures with assistance from Vermont Department of Health. PSD and DEC's presentation slides are available from the NDCAP website.

- **NorthStar Update on VY Site Decommissioning Activities:** NorthStar Panelist Corey Daniels summarized decommissioning activities completed since January 2019. Of note, all spent fuel racks have been removed from the Spent Fuel Pool (SFP). The SFP has been fully drained. Refurbishment of the onsite rail spur is complete. Segmentation of the dry well head is complete. The Reactor Vessel Head (RVH) has been removed; preparations for segmenting the RVH are underway. The former Construction Office Building has been demolished.
- **Orano Presentation on Reactor Vessel Segmentation:** Corey Daniels' Decommissioning Activities presentation also discussed preparations underway for upcoming reactor vessel segmentation work. (Sebastien Guillot of Orano was available to answer questions on this part of Corey's presentation.) The specialized tools that will be used for these activities were highlighted. The temporary radioactive waste storage to be used for this project were also described. While most of the resulting radioactive waste will be shipped via railcar for permanent disposal, the Greater Than Class C (GTCC) Low Level Radioactive Waste produced will be stored in a Holtec dry cask storage cannister very similar to those currently storing VY's spent nuclear fuel onsite. This cannister will be stored on one of VY's two Independent Spent Fuel Storage Installation (ISFSI) pads. The NorthStar / Orano slides for this presentation are available are available from the NDCAP website
- **Issues Committee Recommendations on Topics to be Addressed by the Panel in 2019:** Panel Chair Chris Campany brought the Panel's attention to the *Summary of Items Selected for May 2019 NDCAP Meeting Agenda* and *Potential Items for Future Meetings*, found on pages 5 and 6 of the April 22nd Issues Committee Meeting notes (available at <http://publicservice.vermont.gov/electric/ndcap>). The Committee meeting identified topics to be discussed in 2019 and beyond. The Panel consensus was that these were reasonable topics for consideration. Discussion turned to additional topics that the Panel may want to consider, including items such as Congressional bills that could impact US nuclear waste policy, long-term and interim spent nuclear fuel storage, and what potential alternatives are available. It was noted that Windham Regional Commission (WRC) has suggested a dialogue between potential host communities meant to receive nuclear waste and host communities with plants being decommissioned. Perhaps the Panel should consider

supporting WRC's position? Chris Campany reminded the Panel that any Panelist can draft an advisory opinion on topics such as these for Panel consideration.

- **Panel Participation in Nuclear Energy Innovation and Modernization Act Requirements:** Part of the recently enacted Federal Nuclear Energy Innovation and Modernization Act (NEIMA) of 2019 requires the NRC to prepare a Congressional Report on "best practices" for facilitating public involvement in active reactor decommissioning via panels such as VT NDCAP. The NRC will host at least 10 public meetings throughout the US in 2019 to gather information for this report. Preferred meeting locales are near actively decommissioning plants or in communities with established public engagement panels. The WRC and VT PSD have each requested that one of these meetings be held within the Vermont Yankee vicinity. (The NRC subsequently granted these requests; a NEIMA public meeting was held in Brattleboro on September 10, 2019.)

The Panel agreed to draft a NEIMA reply document outlining the function and scope of the VT NDCAP for the NRC's best practices report to Congress. State Nuclear Engineer Tony Leshinskie was directed to begin compiling a report outlining the formation of NDCAP and its activities to date and to make this draft available to the Panelists for their review. (The subject document was drafted and posted to the VT NDCAP website; it was subsequently discussed at the Panel's October 16, 2019 meeting.)

- **Summary of First Nuclear Decommissioning Collaborative Meeting:** Panel Chair Chris Campany gave a verbal overview of the inaugural meeting the Nuclear Decommissioning Collaborative, held in Washington DC in April. The meeting included several federal agencies, host communities and industry experts. The goal was to see what existing governmental programs could be used to address economic issues stemming from reactor decommissioning. The meeting did not address other impacts such as carbon footprint changes, etc., or whether host communities should be compensated for storing spent nuclear fuel at former power plant sites. Essentially, the meeting considered whether federal planning money should go to communities in which nuclear power plants are closing.

October 16, 2019

- **VT Agency of Natural Resources (ANR) Decommissioning update:** Panel member and Commissioner of Environmental Conservation (DEC) Emily Boedecker summarized the State environmental permitting required for VY's current decommissioning and demolition activities and discussed the timelines for DEC to review several permit applications filed by NorthStar for upcoming decommissioning and demolition work. DEC's draft permits (in response to the NorthStar filings) are posted for 30 days on DEC's Environmental Notice Bulletin for public comments. DEC's review to date on NorthStar's non-radiological site characterization report filed on July 11 was also summarized. The report has been reviewed by Haley & Aldrich (NorthStar's environmental consultant), ATC Group Services (DEC environmental consultant for the Vermont Yankee clean-up) and DEC Staff. On site hazmat sampling conducted to date was also described along with initial planning for follow-up sampling.

- Several Panelist questions requested further details on the sampling process thus far. In response, the process under which split samples are evaluated by both Haley & Aldrich and ATC was outlined, as well as how the initial sampling locations were chosen. In response to an additional question regarding the impact of the new groundwater intercept wells on intrusion water leakage onsite, it was noted that some future contaminated groundwater shipments would still be necessary. Pumping from the intercept wells shows significant promise but has yet to be fully implemented.
- **Vermont Department of Public Service on the Vermont Yankee Decommissioning Update:** Panel Member and Commissioner of Public Service June Tierney presented an update on Public Service Department activities regarding Vermont Yankee decommissioning. The department remains in close contact with NorthStar and makes sure that reporting protocols set in place (from the VT PUC ruling in the NorthStar Vermont Yankee purchase case) are followed. A summary of the onsite activities under Departmental observation was provided. Financial summaries for the Nuclear Decommissioning Trust (NDT), the Site Restoration Trust (SRT) and disbursements from these Trusts were also shared.
- Panelist questions focused on what determined whether a decommissioning expense could be paid from the NDT versus what could be paid from the SRT. Commissioner Tierney noted NDT expenses primarily relate to clean-up of Vermont Yankee's "power block" buildings (i.e. the Reactor and Turbine Buildings). The SRT covered more general site clean-up expenses. State Nuclear Engineer Tony Leshinskie added that the Public Service Department does have staff that tracks which expenses are paid from which funds.
- **Vermont Department of Health Update:** Panel member Dr. Bill Irwin gave a verbal summary of the Health's current oversight of Vermont Yankee decommissioning activities. At this stage, Health's primary focuses are the ongoing asbestos abatement tasks and the radioactive waste shipments leaving the Vermont Yankee site. Additional onsite activities will be reviewed as decommissioning moves forward. In response to Panelist questions on to what extent radiation levels at Vernon Elementary School are known, Dr. Irwin reported that the school has been under continuous monitoring since 1972 (when Vermont Yankee began producing electricity). The results of this monitoring are published annually on the Department of Health website.
- **NorthStar Update on VY Site Decommissioning Status:** Panel Member Corey Daniels, NorthStar Senior ISFSI (spent fuel storage) Manager at Vermont Yankee, presented a summary of recent site decommissioning activities, which focused on completed portions of the ongoing reactor vessel segmentation tasks, dismantling of the site's former steam turbine, rail spur enhancements for facilitating radioactive waste shipments and the demolition of VY's cooling towers over the summer. The critical path for the decommissioning project remains the reactor vessel segmentation task. Slides for this presentation consisted primarily of photos of recent decommissioning activities. An embedded video is included, which was played during the presentation. This video may be viewed at <https://www.youtube.com/watch?v=S0Vm4MPCGqs> or through the presentation slides available on the NDCAP website.

- **Congressional Delegation Update on Decommissioning Related Legislation:** The provided update is summarized in Section XI herein.
- **VT NDCAP Submittal to NRC Summarizing History of the Panel:** Following a brief discussion of several minor changes to the NEIMA reply document outlining the function and scope of the VT NDCAP for the NRC's best practices report to Congress, the Panel approved the document for its submittal to the NRC. The final version of this document is available on the NDCAP website and was submitted to the NRC via the Federal Register prior to the December 6 filing deadline for NEIMA comments.
- **Proposed Changes to the Panel Composition and Enabling Statute for Panel Discussion:** Potential changes to the Panel's membership, duties and administration were then opened for discussion. The Panel's Issues Committee had previously met on July 24 to compile ideas for potential Panel changes to be discussed at the next several meetings of the full Panel. Ideas compiled by the Issues Committee are summarized in the July 24 meeting notes available on the NDCAP website. Panel discussion focused on the following topics: The need for additional Town of Vernon representation on the Panel; whether Panel duties should include discussing economic redevelopment of the Vermont Yankee site; whether Agency of Commerce and Community Development (ACCD) and International Brotherhood of Electrical Workers (IBEW) representation on the Panel should be eliminated and the need for changing the Panel's funding source. The Panel referred these topics back to the Issues Committee for a more defined recommendation.
- **Election of New Panel Officers:** In separate Roll Call votes, Josh Unruh was elected Panel Chair and Lissa Weinmann was re-elected Panel Vice-Chair for terms of 1 year. The prior Panel Chair, Chris Campany, did not seek reelection, but remained on the Panel as representative for the Windham Regional Commission.

December 5, 2019

- At the start of this meeting, Panel Chair Josh Unruh noted that several representatives from the Town of Buchanan, New York were present to observe the Panel's proceedings. (A panel similar to VT NDCAP is currently being created in Buchanan for the Indian Point Power Station's upcoming decommissioning.)
- **NorthStar Update on Recent VY Site Decommissioning Activities:** Panel Member Corey Daniels, NorthStar Senior ISFSI (spent fuel storage) Manager at Vermont Yankee, presented a summary of recent site decommissioning activities. This summary discussed recently completed reactor vessel segmentation project tasks, the near completion of dismantling VY's steam turbine, progress in onsite asbestos abatement, the current status and future plans for onsite groundwater intrusion management and results from several recently completed radiological and hazmat surveys. An embedded video is included, which was played during the presentation. This video may be viewed at <https://www.youtube.com/watch?v=-HSeTZDPYF8> or through the presentation slides available on the NDCAP website. This presentation also discussed several "stakeholder engagement" activities that recently occurred. These included a confidential survey of selected stakeholders and a proposal for

Antioch University of New England (AUNE) to perform a VY site study / land use inventory for potential redevelopment options. In response to a request from Public Service Commissioner June Tierney, NorthStar committed to provide a public summary of this engagement survey to document:

- How many people were contacted?
- When was the survey done?
- What survey questions were asked?
- What were the top findings of the report?

The resulting public summary is available from the NDCAP website.

- **Vermont State Agencies' Update on VY Decommissioning:** VT Public Service Department (PSD) Special Counsel Allison Bates-Wannop provided a brief presentation on PSD's continuing financial and technical reviews of Vermont Yankee's decommissioning. PSD's primary responsibility is to confirm that the work completed to date is reasonable after considering the NorthStar's reimbursement requests from the Nuclear Decommissioning Trust (NDT) to date. Overall, the VY's decommissioning continues to progress smoothly. It was noted that PSD's hired expert to assist in this oversight and assessment process performed similar work during Yankee Rowe's active decommissioning.
The PSD presentation also discussed the Department's expanded "Vermont Yankee Decommissioning" website that recently went live. This new website is available at: <https://publicservice.vermont.gov/content/vermont-yankee-decommissioning>. The new website reports monthly balances for Vermont Yankee's Nuclear Decommissioning Trust (NDT) and Site Restoration (SRT) funds. It also includes the summary of decommissioning expenditures that PSD receives monthly. The website includes links to other State Agency websites and webpages related to Vermont Yankee's decommissioning, the Panel's website and Vermont Yankee-related sections of the NRC's website.
- In response to PSD's presentation, Panel Member and Vermont Representative Laura Sibilia asked the following several questions regarding the State's review of VY's decommissioning:
 - What happens if there is a surplus or a deficit in funds in the NDT and SRT after the decommissioning project is complete?
 - Is the cost to complete (the decommissioning project) updated on a regular basis?
 - What is the cost to complete Vermont Yankee's decommissioning?
 - Is there a "fudge factor" (i.e. an uncertainty) built into the cost to complete?
 - What is the estimated percentage of the work completed?While preliminary replies were provided by Commissioner Tierney and Ms. Bates-Wannop, the Commissioner committed to making a detailed, written reply available to the Panel. This detailed reply is available through the NDCAP website at: <https://publicservice.vermont.gov/content/commissioner-tierney-letter-representative-sibilia-regarding-vermont-yankee-decommissioning>
- **Updating Statute Defining Panel Duties, Composition and Funding:** The Panel reviewed several recommendations made by the Issues Committee from its November 21, 2019

meeting. The Issues Committee “list of ideas” from its July 24, 2019 meeting were also reviewed. After some Panel discussion, the Panel voted and approved several recommendations deemed to be straight-forward:

- The Town of Vernon’s representation on the Panel was increased to two representatives
- IBEW representation on the Panel was eliminated (prior Panel discussion had noted that there were no longer any IBEW members working at the VY site; the IBEW had previously indicated it had no objection to its removal from the Panel. Note: Several Panel members expressed concern over eliminating this position, but no other viable option for VY site worker representation on the Panel could be identified.)
- Replace “Vermont Yankee Nuclear Power Station” and “VYNPS” nomenclature in the Panel legislation to simply “Vermont Yankee.”

Several items were tabled for subsequent discussion (in 2020):

- Making the Panel’s New Hampshire and Massachusetts representation optional
- Eliminating the Agency of Commerce and Community Development (ACCD) representation from the Panel (ACCD representation requested for discussion)
- Making all Agency representation Ex Officio
- Whether State Agencies should be required to summarize their findings on the required March 31 annual reporting to the Panel
- All potential duties changes noted in the July 24 Issues Committee Summary list
- Whether the required number of Panel meetings per year should be reduced from four to one

The Panel then voted unanimously to authorize Reps. Laura Sibilio and Sara Coffey to incorporate the approved language changes for introduction to the Legislature.

- **Draft Annual Report (for 2019):** The Panel voted to approve the following outline for the Panel’s 2019 Annual Report to the Legislature:

<https://publicservice.vermont.gov/content/draft-outline-2019-annual-report>.

State Nuclear Engineer Tony Leshinski committed to having a draft annual report based on this outline available for Panel review by January 6, 2020.

IV. Major Milestones and Activities at the Vermont Yankee Site

- 1/11 Sale of Entergy Vermont Yankee to NorthStar Group Services completed
- 1/28 First major decommissioning task, removal of Spent Fuel Pool Storage Racks, begins
- 1/28 First Nuclear Regulatory Commission (NRC) onsite inspection with NorthStar as VT Yankee owner / licensee begins
- 2/12 Work to expand VT Yankee’s onsite rail spur begins
- 3/7 Removal of last Spent Fuel Pool Storage Rack completed
- 3/18 Second NRC onsite inspection of the year begins
- 3/18 Reactor Vessel shield plug segmentation commences
- 4/9 VT Yankee’s expanded onsite rail spur is activated
- 4/10 Reactor Vessel Drywell Head segmentation commences

378 • 4/15 Third NRC onsite inspection of the year begins
379 • 4/15 Demolition of “Construction Office Building” completed
380 • 4/17 Reactor Vessel (RV) Drywell Head segmentation completed
381 • 4/17 RV Head segmentation activities commence
382 • 4/18 NRC Early 2019 Inspection Exit Meeting – no issues, findings, or violations
383 • 4/22 First radioactive waste shipment via railcar leaves VT Yankee site
384 • 5/13 Initial non-radiological site characterization begins
385 • 5/13 Dismantling of the Turbine begins
386 • 5/20 Fourth NRC onsite inspection of the year begins
387 • 6/7 Reactor Vessel Head segmentation commences
388 • 6/18 Fifth NRC onsite inspection of the year begins
389 • 6/27 RV Head segmentation completed
390 • 7/11 Initial non-radiological site characterization completed
391 • 7/11 Demolition of East Cooling Towers completed
392 • 7/22 Demolition of West Cooling Towers completed
393 • 7/29 Sixth NRC onsite inspection of the year begins
394 • 8/2 First RV internal component (Steam Dryer) removed for segmentation
395 • 8/19 Seventh NRC onsite inspection of the year begins
396 • 8/22 NRC Mid-2019 Inspection Exit Meeting – no issues, findings, or violations
397 • 9/6 Clearing of Cooling Tower debris completed
398 • 9/9 Segmentation of Turbine Shaft commences
399 • 10/21 “Contaminated Worker” Emergency Drill Completed
400 • 10/21 Eighth NRC onsite inspection of the year begins
401 • 11/11 Reflood of RV, Separator Pit and Spent Fuel Pool for underwater segmentation
402 activities begins
403 • 11/13 “Site Security” Emergency Drill Completed
404 • 12/2 Reflood of the RV, Separator Pit and Spent Fuel Pool for underwater segmentation
405 activities completed
406 • 12/4 Ninth NRC onsite inspection of the year begins
407 • 12/5 NRC Late-2019 Inspection Exit Meeting – no issues, findings, or violations
408 • 12/19 “Shipping & Receiving” Warehouse abandoned (mid-2020 demolition expected)
409
410

V. Nuclear Decommissioning Trust (NDT) and Site Restoration Trust (SRT) Fund Updates
(based on latest available data for 2019).

NDT	SRT
\$506.7 M Balance on October 31, 2018	\$33.5 M Balance on October 31, 2018
\$498.4 M Balance on December 31, 2018	\$60.0 M Balance on January 11, 2019*
\$478.6 M Balance on June 30, 2019	\$63.0 M Balance on June 30, 2019
\$456.3 M Balance on September 30, 2019	\$63.3 M Balance on September 30, 2019
\$446.3 M Balance on October 31, 2019	\$63.1 M Balance on October 31, 2019
\$435.7 M Balance on November 30, 2019	\$62.6 M Balance on November 30, 2019
\$428.3 M Balance on December 31, 2019	\$62.3 M Balance on December 31, 2019

* Closing date of the Vermont Yankee Sale to NorthStar

Monthly balances for the NDT and SRT are available at:

<https://publicservice.vermont.gov/content/trust-balances>.

Summaries of monthly expenditures for the Vermont Yankee Decommissioning Project are available: <https://publicservice.vermont.gov/content/public-reports>.

VI. Spent Nuclear Fuel Status at Vermont Yankee

Transfer of VY's entire spent fuel inventory to dry cask storage was completed on August 1, 2018. No changes to VY's spent fuel storage occurred in 2019. A total of 58 spent fuel dry casks remain stored at the VY Independent Spent Fuel Storage Installation (ISFSI). A total of 7 vacant cask spaces remain on the ISFSI pads. Four of these are required should the arrangement of the casks on the two ISFSI pads need to be changed for any reason. The remaining three spaces are designated for storage of any Greater than Class C (GTCC) Low Level Nuclear Waste (e.g. highly contaminated VY Reactor Vessel and/or Spent Fuel Pool components) resulting from VY's active decommissioning. It is currently anticipated that one GTCC Nuclear Waste dry cask will be stored on the VY ISFSI at a later date.

VII. Significant Vermont Yankee Site Changes

Monitoring of the Vermont Yankee Spent Nuclear Fuel is controlled from the site's Central Alarm Station (CAS) Building, which became operational on August 23, 2018. No changes to Vermont Yankee's spent fuel monitoring programs occurred during 2019. All Vermont Yankee site changes that occurred during 2019 were the result of decommissioning activities which commenced on January 11, 2019.

The following onsite structures were demolished during 2019:

- The Construction Office Building
- The East and West Cooling Towers

The Cooling Tower Basin structure (a concrete lined, man-made pond) remains intact for potential future onsite water management use. The concrete pad from the Construction Office Building has been repurposed as a temporary waste material storage area.

The onsite rail spur has been refurbished and expanded. In addition to the existing rail spur that runs to south end of the Turbine Building, an additional spur has been added that runs to the southeast corner of the site's former Protected Area (along the south side of the power block buildings). This new spur joins the existing spur near the onsite Plant Support Building (the 3-story office building near the western edge of the site). The location of the second spur allows the concrete pad from the Construction Office Building to be used for staging scrap material that will be shipped offsite via railcar. To facilitate railcar loading during poor weather conditions, a prefabricated metal-frame and plastic wall "big-top" structure has been erected over the southeastern end of the new rail spur.

A short "rail siding" has been added near the north end of the existing rail spur to facilitate onsite railcar storage.

VIII. Vermont Yankee Water Management Program

- The rate of groundwater entering the Turbine Building is consistent with rates seen during 2017 and 2018.
 - Seasonal variations to date produced a rate range between 250 and 800 gallons per day (consistent with 2017 and 2018 rates)
 - At End of Year the rate was approximately 300 gallons per day (consistent with 2017 rates). This rate was significantly lower than the 621 gallons per day estimated on December 31, 2018. (The higher End of Year 2018 rate was due to high rainfall in late 2018.)
 - Over 90% reduction in leakage since 2015 (consistent with 2018 rates)
- Roughly 182,000 gallons have shipped in 2019
 - 89,200 gallons of which have shipped to Waste Control Specialists (WCS) NRC-licensed disposal site in Andrews County, Texas.
 - 92,400 gallons have shipped to US Ecology's hazardous waste disposal facility in Grandview, Idaho. (Vermont Yankee is currently licensed by the NRC to ship up to 200,000 gallons of contaminated water to this facility.)
 - All 2019 water shipments made were via tanker rail cars (tanker trucks used in prior years); 8 rail shipments in total.
 - Groundwater shipments to WCS and US Ecology facilities continue "as-needed."
- A total of 1,055,000 gallons have been shipped to date
- Onsite water storage (using VY's former Condenser) can hold water as much as 820,000 gallons, if necessary, until appropriate disposal arrangements are made.
- No water discharges to the Connecticut River have occurred.
- Intercept wells are being drilled at the Turbine Building periphery to mitigate the need for future water shipments.

IX. Decommissioning Waste Shipments Summary

A summary of radiological and hazardous waste shipments made from the Vermont Yankee site during 2019 follows.

IX.A Radioactive Waste Shipments Summary

An annual summary of Vermont Yankee's radioactive waste shipments is published in mid-May of the following calendar year as part of the "Radioactive Effluent Release Report" filed with the US Nuclear Regulatory Commission and the Vermont Public Service Department. Preliminary radioactive waste volume data available as of December 31, 2019 indicates that approximately 122,000 cubic feet of radioactive waste was shipped from the Vermont Yankee site during 2019. Excluding the contaminated water shipments to US Ecology reported in Section VIII herein, all 2019 calendar year radioactive waste shipments were sent to Waste Control Specialists' (WCS) disposal facility Andrews County, Texas. Excluding two shipments made by truck, all 2019 calendar year shipments were made via railcar.

IX.B Hazardous Waste Shipments Summary

- 1521 tons of construction and demolition debris was shipped to the following facilities:
 - Western Recycling, Wilbraham, MA
 - Millbury C&D Processing Station, Millbury, MA
- 537 cubic yards of asbestos was shipped to the following facilities:
 - Minerva Landfill, Waynesburg, OH
 - Waste Management of New Hampshire, Rochester, NH
- 237 tons of scrap metal was shipped to the following facility for recycling:
 - Mattuchio Scrap Metal, Everett, MA

X. Vermont Congressional Delegation

Representatives of Senator Patrick Leahy, Senator Bernie Sanders, and Congressman Peter Welch attended several NDCAP meetings in 2019.

At the October 16, 2019 meeting, Ms. Haley Pero of Senator Sanders' office provided a verbal update on the recent bills proposed in Congress that, if enacted, would impact the overall reactor decommissioning process within the United States. All decommissioning-related bills introduced in the 2019 Congressional session were bills that had been introduced in prior sessions. These bills remain in Committee. Bills that were sponsored by Senator Sanders or Vermont Congressman Peter Welch were specifically identified.

It was noted that the Trump Administration's budget bill for FY2020 includes funding for the restart of Yucca Mountain licensing efforts; the Congressional FY2020 budget bills do not. Additional information on any of these bills, including their text, can be obtained through Senator Sanders' Office. Contact Ms. Pero for additional information. It was also noted that the

Nuclear Regulatory Commission's ongoing Decommissioning Rulemaking effort remains on-target for Commission Approval in October 2021. Questions from the Panel noted whether any of the bills would support reducing (i.e. result in more-stringent) radiological site release standards. Ms. Pero agreed to report back to the Panel regarding this question. A second Panel question inquired whether private interim (spent fuel) storage facilities were even legal. Ms. Pero deferred on answering this question, citing the ongoing legal debate on this topic.

XI. The Issues Committee of NDCAP

The Issues Committee, formed in 2015 to make recommendations on topics for discussion at NDCAP meetings, was reconstituted at the January 31, 2019 meeting of the Full Panel. The following Panel members volunteered to serve on the Committee: Chris Campany, Corey Daniels, Derrik Jordan, Michael Root and Lissa Weinmann. Several additional Panel members also participated in at least one of the Issues Committee meetings held during 2019: Bob Leach, Sara Coffey, David Pearson and Josh Unruh. The Issues Committee met three times during 2019, in April, July and November. In addition to identifying topics for discussion at Full Panel meetings, the Committee brainstormed potential Panel changes in composition and duties for further discussion by the Full Panel. Topics discussed at the Issues Committee meetings are summarized in the meeting notes available at the NDCAP website. Mark-ups of the Panel Charter and Legislation creating the Panel that resulted from the Issues Committee discussions are also available from the NDCAP website. (These latter items are included as meeting materials for the Full Panel meetings rather than with the Issues Committee notes.)

XII. Meeting Schedule and Priorities for 2020

During the Panel's December meeting, it was agreed that the Panel will continue to meet quarterly, with the understanding that frequency and timing will be influenced by reporting requirements in Vermont Yankee Sale Agreement (PUC Docket 8880 Approval Order, CPG and MOU) and significant milestones during Vermont Yankee's active decommissioning and site restoration. To this end, the Panel agreed to meet on January 13, 2020, with a primary focus of this meeting to be finalizing the 2019 Annual Report to the Legislature. (Note: At the January 13, 2020 meeting, the Panel agreed to meet on February 3, 2020 to discuss potential Panel funding recommendations.) The Panel also agreed to meet on May 4, 2020. The primary focus of this meeting will be to receive summaries and State Agency evaluations for the March 31, 2020 annual reporting required by the Vermont Yankee Sale Agreement. Scheduling of subsequent Panel meetings to assure the required number of Panel meetings occur in the 2020 calendar year will be decided no later than during the May 4, 2020 meeting.

XIII. Panel Composition Change Recommendations

Consistent with Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report), the Panel “shall assess further changes to the Panel’s membership or duties as appropriate.” Discussion on potential Panel composition and duties changes have occurred during the several Full Panel and Issues Committee meetings held in 2019. These culminated in the Panel voting at its December 5, 2019 meeting to 1) eliminate IBEW representation from the Panel (see details in the Section III, December 5, 2019 regarding this vote) and 2) add an additional Town of Vernon representative to the Panel, thereby increasing Town representation to two Panelists (without increasing the overall size of the Panel). As noted in the December 5, 2019 meeting highlights (in Section III herein) discussion on several additional potential Panel changes were tabled for subsequent discussion in 2020.
